

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the above-captioned patent application:

Listing of Claims:

1. (Canceled).
2. (Canceled).
3. (Previously Presented) An incubator as recited in Claim 62, wherein each of said inner and outer rings are supported for rotation about a central axis of an incubator housing.
4. (Canceled).
5. (Canceled).
6. (Previously Presented) An incubator as recited in Claim 3, wherein at least one of said pluralities of circumferentially disposed sample element receiving areas includes at least two radially adjacent sample receiving stations disposed in said areas wherein said at least one second drive mechanism is capable of selectively radially moving said at least one sample element between at least said at least two adjacent sample element receiving areas.
7. (Previously Presented) An incubator as recited in Claim 6, including at least one read station disposed in relation to one of said inner and outer rings, such that said at least one first drive mechanism can rotate one sample element receiving area into a read position, said at least one second drive mechanism enabling a sample element to be selectively and radially moved into the read position.

8. (Original) An incubator as recited in Claim 7, including a dump station radially adjacent said read station.
9. (Original) An incubator as recited in Claim 7, wherein said read station includes a device capable of detecting an optical property of a test sample element.
10. (Original) An incubator as recited in Claim 9, wherein said device is a reflectometer .
11. (Previously Presented) An incubator as recited in Claim 62, wherein said at least one second drive mechanism selectively and radially removes at least one sample element from said incubator for later reinsertion therein.
12. (Previously Presented) An incubator as recited in Claim 7, wherein said read station includes a device capable of measuring an electrical property of a sample element.
13. (Original) An incubator as recited in Claim 12, wherein said device is an electrometer.
14. (Previously Presented) An incubator as recited in Claim 62, wherein said sample elements include a plurality of dry slide elements, each of said dry slide element having a volume of a patient sample fluid metered thereupon prior to entry into said incubator.
15. (Previously Presented) An incubator as recited in Claim 6, wherein said at least one second drive mechanism includes at least one shuttle mechanism for radially shuttling sample elements into and out of said incubator housing.

16. (Previously Presented) An incubator as recited in Claim 15, wherein said shuttle mechanism is circumferentially disposed immediately adjacent said at least one second drive mechanism.

17. (Previously Presented) An incubator as recited in Claim 15, wherein said shuttle mechanism includes a reciprocating pusher blade disposed in relation to said incubator housing to shuttle at least one sample element into at least one sample element receiving station.

18. (Previously Presented) An incubator as recited in Claim 15, wherein said shuttle mechanism is capable of shuttling at least two radially disposed sample elements into radially adjacent sample element receiving areas simultaneously.

19. (Previously Presented) An incubator as recited in Claim 15, including a supply of stacked sample elements, said shuttle mechanism being disposed adjacent to said sample element supply.

20. (Previously Presented) An incubator as recited in Claim 62, wherein said at least one first drive mechanism includes a belt drive wrapped about the periphery of at least one of said inner and outer rings.

21. (Previously Presented) An incubator as recited in Claim 62, wherein said inner and outer rings are independently driven relative to one another by said at least one first drive mechanism.

22. (Previously Presented) An incubator as recited in Claim 62, wherein at least two load positions of a sample element receiving area differ in height relative to one another.

23. (Canceled).
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55. (Canceled).

56. (Previously Presented) A method as recited in Claim 63, including the additional steps of:

reading a first sample element which has been rotated into alignment with a read station;

radially driving an adjacent second sample element into alignment with said read station; and

reading said second sample element.

57. (Previously Presented) A method as recited in Claim 56, including the step of dumping each of said sample elements from said inner ring after said reading steps.

58. (Previously Presented) A method as recited in Claim 57, including the step of loading at least one sample element into said inner ring after said dumping step.

59. (Previously Presented) A method as recited in Claim 58, wherein said loading step includes the step of simultaneously radially shuttling at least two adjacent test sample elements into radially adjacent sample element receiving areas.

60. (Canceled).

61. (Canceled).

62. (Previously Presented) A sequential tandem incubator for use in a clinical analyzer, said incubator comprising:

an inner ring and an outer ring, said outer ring including a first plurality of circumferentially disposed sample element receiving areas and said inner ring including a second plurality of circumferentially disposed sample element receiving areas, each of said first and second pluralities of sample element receiving areas being radially adjacent to one another on a common horizontal plane;

at least one first drive mechanism for driving at least one of said inner and outer rings rotationally; and

at least one second drive mechanism for selectively moving sample elements exclusively in a radial direction along said common horizontal plane between said first and second plurality of said circumferentially disposed sample element receiving areas in order to increase throughput of said incubator.

63. (Previously Presented) A method of incubating and reading test sample elements using a sequential random incubator in a clinical analyzer, said sequential random incubator comprising an inner ring and an outer ring, said outer ring including a first plurality of circumferentially disposed sample element receiving areas and said inner ring including a second plurality of circumferentially disposed sample element receiving areas, each of said first and second pluralities of sample element receiving areas being radially adjacent to one another on a common horizontal plane, said method comprising the steps of:

radially loading at least one sample element into an empty sample element receiving area;

rotating at least one of said inner and outer rings along the horizontal plane; and

moving said at least one sample element radially between said first and second pluralities of radially adjacent sample element receiving areas of said incubator along said common horizontal plane so as to improve the throughput of said incubator.

64. (Previously Presented) An incubator as recited in Claim 17, wherein a plurality of shuttle mechanisms are disposed at predetermined circumferential locations adjacent to said inner and outer rings.

65. (Previously Presented) An incubator as recited in Claim 64, wherein at least one shuttle mechanism is radially disposed on the interior of said inner ring.

66. (Previously Presented) An incubator as recited in Claim 64, wherein each of said shuttle mechanisms include a reciprocating pusher blade capable of moving radially through each of said inner and outer rings.

67. (Previously Presented) An incubator as recited in Claim 62, wherein said inner and outer rings are concentric about a single center axis.

68. (Canceled).

69. (Canceled).

70. (Canceled).

71. (Canceled).